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ABSTRACT

A conceptual model was developed and assessed to examine the relationship between critical thinking and political participation. Although the empirical and theoretical bases for the model are not fully discussed, findings based on path analysis are presented. Based on data from 118 graduate and undergraduate students, the model affirms the assumption that intellectual skills are antecedent to participatory behavior; however, the relationship is not necessarily a direct one. Critical thinking strongly influences the development of feelings of political efficacy which in turn positively influences political participation. Critical thinking also has a positive direct effect on specific democratic attitudes which in turn have a positive influence on political participation. Persons who possess certain intellectual skills are more likely to feel that they are able to cope with and influence the political world. They are also more likely to apply democratic norms and values to specific situations. Therefore, because critical thinking is antecedent to political participation, it should be a major focus of social studies education. Research studies indicate that the type of social studies instruction that may be most effective for teaching critical thinking is one that uses an inquiry method of instruction. (RM)

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An Analysis of the Cognitive Antecedents of Political Variables

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SP 015 707

Paper presented at the American Educational Research Association, New Orleans, April 23-27, 1984.

Introduction

Statement of the Problem

Two of the major goals of education general, and of social studies education in particular, are education for citizenship and development of the ability to think critically. Traditional concepts of citizenship have focused on a citizen cognizant of factual knowledge about how the government operates, a citizen respectful of authority, and a citizen who has desirable attitudes and habits which generate support for the system and the status quo. In general, this narrow focus regarding citizenship has yielded to more contemporary views that emphasize skills in communication, decision-making, conflict resolution, and other areas relevant to citizenship competence and political participation (Thompson, 1970; Remy, 1979; Massialas, 1972; Eyler, 1977). Extensive lists of citizenship characteristics and goals have been made and revised, and definitions of the good citizen abound. Each shares, explicitly or implicitly, a common orientation, and that is a focus on participation as a major component of citizenship. As Renshon (1974) states, "citizen participation has been incorporated as one of the defining characteristics of political democracy" (p. 14). Thus, a primary goal of social studies education is to develop citizens who are willing and able to participate politically.

Beyond stating that social studies education should develop a "commitment to democratic participation," the National Council for the Social Studies Curriculum Guildelines (1971) state that a further goal is to develop abilities in "intellectual skills, usually called thinking". Many statements exist in the social studies education literature that affirm this commitment to critical thinking as an educational ideal (Bruton, Kimball, and Wing, 1960; Decaroli, 1973; Fair and Shaftel, 1967).

Little evidence supports a contention that these two goals of social studies education, political participation, and critical thinking, are being observed or realized. Regarding the impact of education on political participation, Ehman (1980) concludes from a review of the literature, "that schooling is more closely linked as an important socialization agent in the acquisition of political knowledge and awareness than as a shaper of political attitudes and participation" (p. 103). Litt (1968), Langton & Jennings (1968), and Jennings, Langton, Niemi (1974) report that civics courses have little effect upon students' attitudes toward political participation. Levenson (1972) finds a lack of congruence between teacher-expressed goals of citizenship education and political participation. Also, despite its prominence in the social studies education literature and in social studies curriculum guidelines, the pronounced goal of critical thinking has not been borne out in practice. Parsons and Shaftel (1967) conclude from interview data that:

> Though the participating teachers were able to articulate the professional ideology regarding thinking, they had only the vaguest of notions of what thinking is. They tend to conceive of thinking as a behavioral event rather than as a cognitive process. Consequently, their efforts to teach for thinking usually consisted of provisions or requirements for the event to occur. Evidence that the behavioral event had "happened" was provided by the pupil production of a standardized written or verbal statement (p. 127).

Shaver, Davis, and Helburn (1979) report findings from a national survey and an extensive review of the literature that indicate the absence of teaching for critical thinking. Among these findings are the following:

(1) The dominant instructional tool is the textbook.

(2) The dominant modes of instruction continue to be large-group, teacher-controlled recitation and lecture.

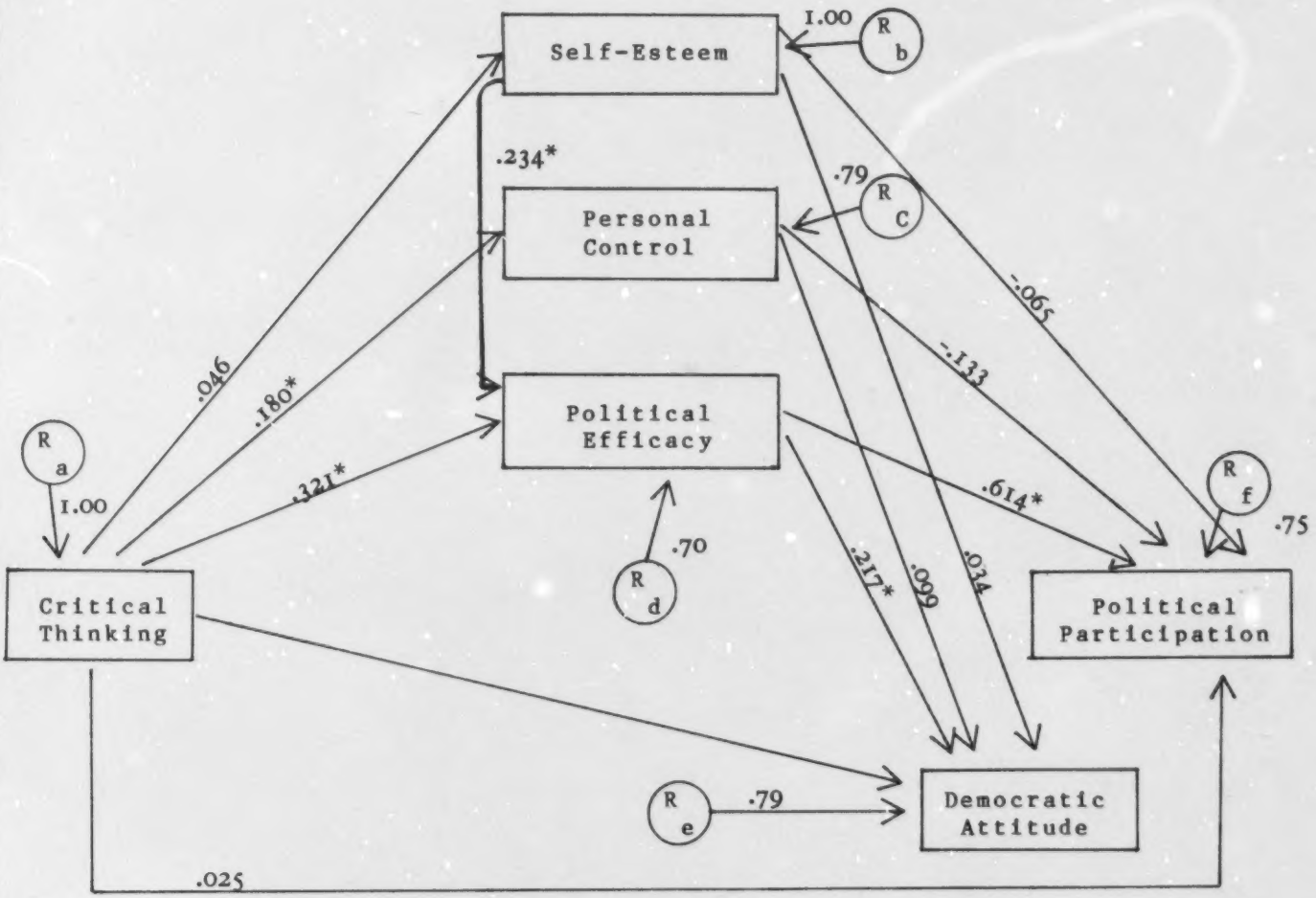
(3) Recitation of facts is considered knowledge.

It is apparent that critical thinking is not receiving the emphasis in the classroom that it received in purpose statements for the social studies. As Aylesworth and Reagan (1969) state, "In spite of protestation to the contrary, the schools tend to teach what to think rather than how to think" (p. 4).

If, as their research indicates, the development of critical thinking and participatory citizenship education are dominant goals in the social studies that are not being achieved, the question arises as to what, if any, relationship exists between the two goals. If such a relationship does exist, it could partially explain why neither are realized. Is the ability to think critically related to participatory attitudes and behavior? If such a linkage does exist, what is the nature of the relationship? Is it a direct relationship or an indirect one through intervening variables? Is critical thinking prior to and prerequisite to political participation? Is political participation directly related to critical thinking? What other variables are relevant in the relationship, if there is a relationship between critical thinking and political participation?

A conceptual model was developed and assessed to examine the relationship between critical thinking and political participation. The model and findings based on path analysis of the model are shown in Figure 1. The empirical and theorelical basis for the model are not fully discussed in this paper; only those relationships that are part of the reduced model are supported. The findings of the original study are:

(1) The indirect effects through the intervening variables of critical thinking on political participation (.341) are much greater than the direct effect ($p = .025$).



*Path coefficients significant at .05 level.

Figure 1. Path diagram showing the direct effect of critical thinking and the indirect effects of critical thinking through self-esteem, personal control, political efficacy, and democratic attitude on political participation.

(2) Self-esteem is not an intervening variable in the relationship between critical thinking and political participation (indirect effect = .003).

(3) Personal control is a mediating variable in the relationship only as it affects political efficacy (indirect effect of critical thinking through personal control on political participation = .024).

(4) Political efficacy is a powerful intervening variable in the relationship between critical thinking and political participation (indirect effect = .197).

(5) Democratic attitude is an intervening variable of moderate strength in the relationship (indirect effect = .085).

In this paper an analysis is made of a reduction of the model which retains only those intervening variables that have significant linking paths between critical thinking and political participation (political efficacy and democratic attitude). Figure 2 illustrates the reduced model. The purpose is to explore further the relationship between critical thinking and political attitudes and behaviors.

Definitions of the Variables

Other terms have been used to identify the same processes and skills that are involved in critical thinking; among them are reflective thinking, inquiry, and problem solving. Most elaborations of these processes and skills have as their basis the writings of John Deivey. His now classic definition of reflective thinking serves the purpose of the study:

> Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends constitutes reflective thought (Dewey, 1929, p. 9).

Political efficacy is the belief that one can have an impact on the political world.

A person with a democratic attitude is one who supports democratic norms and values. These norms and values are considered to be the ones embodied in the "American Creed", freedom, equality, and democratic procedure, and in the Bill of Rights, basic civil liberties.

Political participation is one's involvement in the political sphere, whether local, state, or national. Voting, party and campaign activity, community activity, contacting officials, protesting, and communication are different levels of political participation (Milbrath and Goel, 1977).

Relationships Among the Variables

Critical Thinking and Political Participation

Very little empirical research bears directly on a relationship between critical thinking and political participation. Wilson (1954) does find, in grassroots civic meetings on a college campus, that a capacity for critical thinking is positively related to such participation. Smith (1968) discovers a common characteristic among Peace Corps Volunteers that is related to critical thinking; they maintain a highly articulate intellectual formulation of their situation and their problems. Bennett (1975), in developing and assessing a model of cognitive development in political socialization, finds a significant and positive relationship between grassroots activism and cognitive complexity. He is more interested in the idea that activism enhances cognitive complexity, especially in the political realm, but he states that the relationship extends in both directions. His isolation of the one direction is based on his theoretical interests.

The theoretical perspective regarding critical thinking and political participation is much more highly developed in educational and political literature. In developing a competency-based approach to the promotion of students' political competencies, Gillespie and Patrick (1974) identify 4 sets of political competencies necessary for acting in effective participant roles. One competency is basic intellectual skills, and these skills are critical thinking skills (p. 22). Newmann, et. al., (1977) also indicate the crucial nature of critical thinking for effective citizenship. Patrick (1977) and Cleary (1971) both emphasize the positive effects of teaching students skills in using knowledge to make decisions and solve problems involving political participation. Freire (1974) and Weissbert (1974) both espouse education for citizen participation that focuses on analystical thinking and the ability to conceptualize, organize, and evaluate political phenomena. Descriptions of rational activists also imply the need for critical thinking. Simpson's (1971) statements exemplify this assumption.

> According to the norms of democratic ideology, the personality model to be found in the successful democracy is that of the rational activist. The successful democratic system requires that many citizens be involved, active in politics, and influential. Decision-making, especially in actual voting decisions, must be done on the basis of careful evaluation of evidence and weighing of alternatives. Activity, involvement, and rationality define the role of citizenship; emphasis is on aspects participant behavior rather than on passive, subject behavior on the part of the governed (p. 92).

The basic citizenship skills identified by Remy (no date) are ones that require critical thinking ability. In his working definition of citizenship he also identified participation as a necessary component. If the skills are ones that develop citizenship, then the assumption is that critical thinking is essential to participation.

Theoretically then, critical thinking is linked with political participation. It is not assumed that knowledge of facts and a reliance on authorities for information produce politically active citizens but that political activism requires that a citizen be able to think critically, solve problems, make decisions, accept conflict. Rational participation is not fostered by factual knowledge of political institutions and their functions; it is preceded by knowledge of and skills in the processes by which one is able to deal with problems and make decisions. The complexities of the political world and the issues within it render effective participation almost impossible without the intellectual skills needed to comprehend, organize and deal with that world.

It is assumed in this study that the intervening variables have, like political participation, a basic coognitive component of which critical thinking is an important part. The abilities to support one's beliefs, to organize data in a coherent way, to make generalizations should all make one feel that the world is comprehensible and somewhat predictable. This positive attitude toward the environment would have consequences for the other attitudes. The basis for these assertions is presented below.

Critical Thinking and Political Efficacy

Critical thinking has also been related to personal control. It is critical thinking's contribution to personal control that Siegel (1980) uses as one of three justifications for critical thinking as an educational ideal. Ryckman (1979), after a review of the literature pertaining to locus of control and expectancies, theorizes that cognitive ability is an important factor in personal control. Sniderman (1975) and Lefcourt (1976) find that a sense of powerlessness affects acquistion of knowledge and utilization of information. Assuming, as does this study, that political efficacy is a belief that one has personal control over the political sphere, the support for link between critical thinking and personal control is also valid for posting a relationship between critical thinking and political efficacy.

The political world is a complex one with numberous and confusing issues; it is easy to see how one might feel baffled and powerless in the face of it. The ability to think critically — to organize political data, to support hypotheses and knowledge regarding the political world, to make generalizations about political events -- should engender a sense of control over political outcomes. Instead of a confusing and random series of events, the political world would be more orderly and predictable to the critical thinker. This perspective has not been developed in the literature, but borrowing from the support for a cognitive base for personal control and using the logic presented above, one might expect to find a link between critical thinking and political efficacy.

Critical Thinking and Democratic Attitude

A cognitive basis to the development of democatic values is found by Dipalma and McClosky (1971). They find that deviants from American norms and values are lower in intellectual performance and cognitive skills and that they fail to realize that their claims of support for democracy are not consistent with their attitudes. Those who conform to democratic principles are "more intellectually oriented, more politically aware, and more proficient in their cognitive skills" (p. 294). Sniderman (1975) asserts that norms implicit in the democratic creed are complex, variable, and abstract, and that their understanding and application to specific situations "requires a large fund of information, a habit of attentiveness to politics, and skill in judgment and discrimination acquired through practice and experience" (P. 183). He maintains that education is the main institution for the transmission of the ideal culture and of democratic attitudes, and that this transmission has two aspects.

> As the individual progresses through the educational system, he is brought into direct and increasingly close contact with the values of the official culture. Obviously, education also cultivates the intellectual skills and styles needed to understand the values and to appreciate their relevance to the affairs of everyday life (p. 135).

The strong implication, empirically and theoretically, is that the individual with highly developed cognitive skills such as critical thinking is more likely to comprehend the democratic creed, to detect inconsistencies between personal attitudes and those prevalent in the American creed, and to have these beliefs well-grounded. It would seem that critical thinking ability would be particularly important in one's application of democratic norms to specific situations; many studies show that support for democratic values does not extend beyond a lip-service conformity (McClosky, 1964; Prothro and Grigg, 1960; Weissbert, 1974; Zellman and Sears, 1971). The critical thinker should be better able to detect inconsistencies between claims and applications and to avoid irrational, emotional grounds for actions and reactions in given situations.

Political Efficacy and Democratic Attitude and Political Participation

A relationship between political efficacy and democratic attitude has been found. Janowitz and Marvick (1953) conclude that "authoritarianism is significantly and directly related to feelings of political ineffectiveness" (p. 199). Agger et. al., (1961) find a positive relationship between feelings of political impotency and political cyncism (lack of trust in the democratic system). Ransord (1974) finds a strong relationship between powerlessness and violent political participation.

Langton (1969) states that research overwhelmingly attests to the link between political efficacy and political participation. The research of Jennings and Niemi (1974) supports that relationship. The relationship between the two variables is generally accepted in the political socialization literature, as evidenced by the following statement (Milbrath and Guel, 1977).

> The relationship between feelings of efficacy and conventional political participation is among the most widely documented ones. It has been found over and over that persons who feel efficacious participate at a higher level than those who lack such feelings (p. 58).

The work of Campbell et. al., (1974) and Verba & Nie (1973) are examples of the large number of studies that have substantiated the relationship.

Democratic Attitude and Political Participation

Support for the relationship between democratic attitude and political participation is, for the most part, indirect. The political elite and those with higher educational and economic backgrounds are more likely to support specific applications of democratic norms and values (Prothro and Grigg, 1960). Individuals from higher socioeconomic levels are also the most participatory citizens (Berelson et. al., 1954; Campbell et. al., 1964; Verba and Nie, 1972). These findings suggest that people with democratic attitudes are more likely to participate. Milbrath and Klein (1974) find that authoritarians are less likely than equalitarians to engage in campaign activity. Knutson (1972) states that research strongly indicates "that apathetics (those who do not participate politically) are likely to have a highly undemocratic view of the world" (p. 260).

Methodology

The model was assessed by statistical analysis. Data relating to each of the variables in the model were collected, and the data were subjected to path analysis. The data were collected from 118 undergraduate and graduate students. Since this study is more concerned with "theory-building" than with generalizations about a given population, no attempt to randomize was made. Demographic data were collected to establish that the subjects are a relatively normal group. The .05 level of significance was selected due to the relatively small sample size.

Critical thinking was measured by the Watson-Glaser Critical Thinking Appraisal (Watson & Glaser, 1980). The Critical Thinking Appraisal is divided into five subtests intended to measure skills in inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments. A scale developed by Stentz & Lambert (1977) was used to measure political efficacy. The scale was developed by Stentz & Lambert after extensive research regarding the reliability and validity of traditional political efficacy items. The political participation scale was developed by the author and is based on Milbrath and Goels's (1977, pp. 18 - 19) breakdown of the activities

involved in different modes of participation. The scale attempts to tap two different dimensions of each single activity: (1) the subject's general attitude toward that particular form of participation, and (2) the subject's projected participation in that activity. The political efficacy, democratic attitude, and political participation items were included in a survey form which utilizes a Likert-type scale. Actual political participation was measured by a checklist which also reflects Milbrath and Goel's modes of participation. The total political participation score includes participatory attitudes and actual participatory behavior.

The original data were subjected to path analysis omitting self-esteem and personal control as intervening variables. Figure 2 shows the resulting path diagram. The model is a relatively powerful one but contributes no new information about the relatinship between critical thinking and political participation; the direct and inderect relationships are similar to those in the original model. Further information regarding the relationship between critical thinking and political participation can be gained from looking at component parts of two of the variables, democratic attitude and political participation. Democratic attitude is separated into abstract democratic attitude, as measured by such items as "I believe in free speech for all" and specific democratic attitudes, as measured by such items as "If a Communist were legally elected mayor of this city, the people should not allow him/her to take office". Political participation is separated into participatory attitude, as measured by the political participation scale, and participatory behavior, as measured by the checklist of actual participation.

Based on model in Figure 2, the original data were reanalyzed to determine answers to the following research questions:

1. Is the model more powerful with actual participation or with participatory attitude as the dependent variable?

    a. Does critical thinking have a stronger effect on actual political participation or on participatory attitude?

    b. Does political efficacy have a stronger effect on actual political participation or on participatory attitude?

2. Is abstract democratic attitude or specific democratic attitude the more powerful intervening variable in the model?

    a. Does critical thinking have a stronger direct effect on abstract or specific democratic attitude?

    b. Does political efficacy have a stronger direct effect on abstract or specific democratic attitude?

    c. Does abstract or specific democratic attitude have a stronger direct effect on actual participation?

    d. Does abstract or specific democratic attitude have a stronger direct effect on participatory attitude?

e. Does specific democratic attitude have a stronger direct effect on actual political participation or on participatory attitude?

f. Does abstract democratic attitude have a stronger direct effect on actual political participation or on participatory attitude?

Findings

Figures 3 and 4 show that critical thinking has a stronger direct effect on actual participation (p = .108) than on participatory attitude, but the effect is not significant at the .05 level: Political efficacy has a stronger direct effect on participatory attitude (p = .526) than on actual political participation (p = .350).

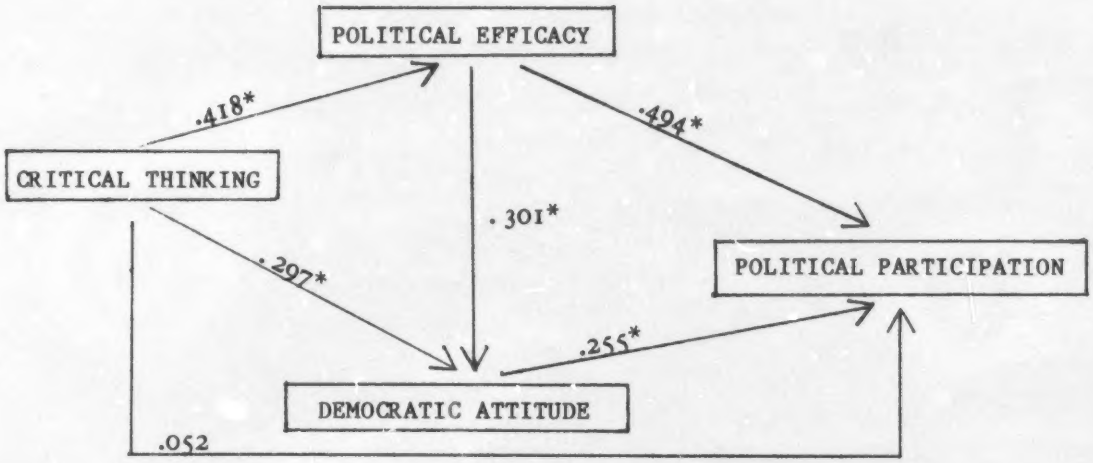
Figures 3 and 4 show that critical thinking has a significant direct effect on specific democratic attitude (p = .391) but not on abstract democratic attitude (p = .122). Political efficacy has a significant direct effect on abstract democratic attitude (p = .391) but not on specifice democratic attitude (p = .159).

The results relevant to questions 2c are shown in Figures 3 and 6. The direct effects of specific democratic attitude and abstract democratic attitude on actual political participation are very much the same (p = .202 and p = .220, respectively). The findings are much the same for participatory attitude, as shown in Figures 3 and 4; specific democratic attitude has a direct effect of .165 and abstract democratic attitude has one of .170.

Figures 3 and 4 show that specific democratic attitude, has a slightly stronger direct effect on actual political participation (p = .202) than on political attitide (p = .165). Abstract democratic attitude, as shown in Figures 5 and 6, also has a slightly stronger direct effect on actual political participation (p = .220) than on participatory attitude (p = .170).

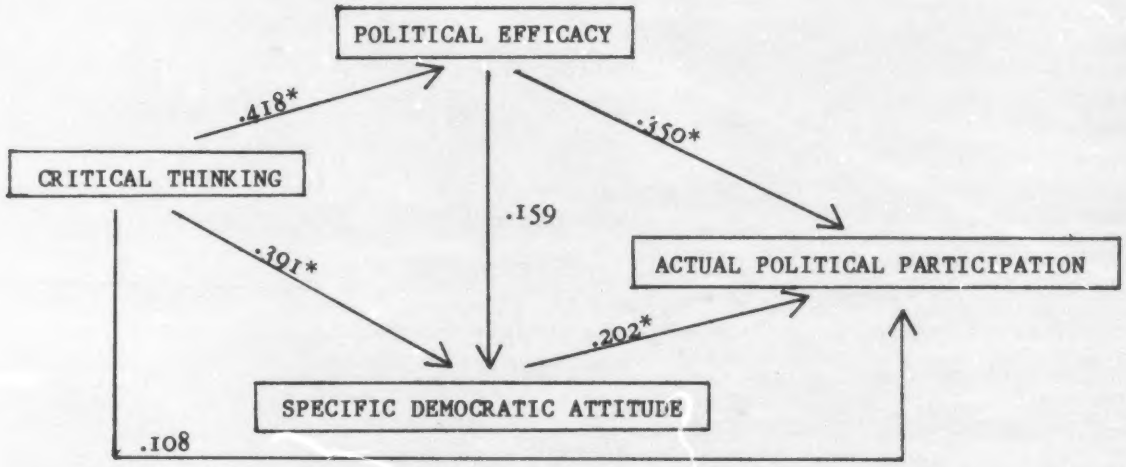
Discussion

The most interesting finding is that critical thinking has a significant direct effect on specific democratic attitude but not on abstract democratic attitude. Although it is difficult to assign any importance to nonsignificant results, it is intriguing too, that the direct effect of critical thinking on actual political participation is over 5 times greater than the direct effect on participatory attitude. What seems to emerge is a pattern of a stronger influence by critical thinking on behavior than on attitudes. This trend is not necessarily contradicted by the strong direct effect of critical thinking on political efficacy. The items tapping political efficacy were not ones that measured attitudes about responsiveness of the government but ones that measured a belief that one's actions could influence the political sphere, and the items were stated personally. ("If I wanted to I could get someone in the



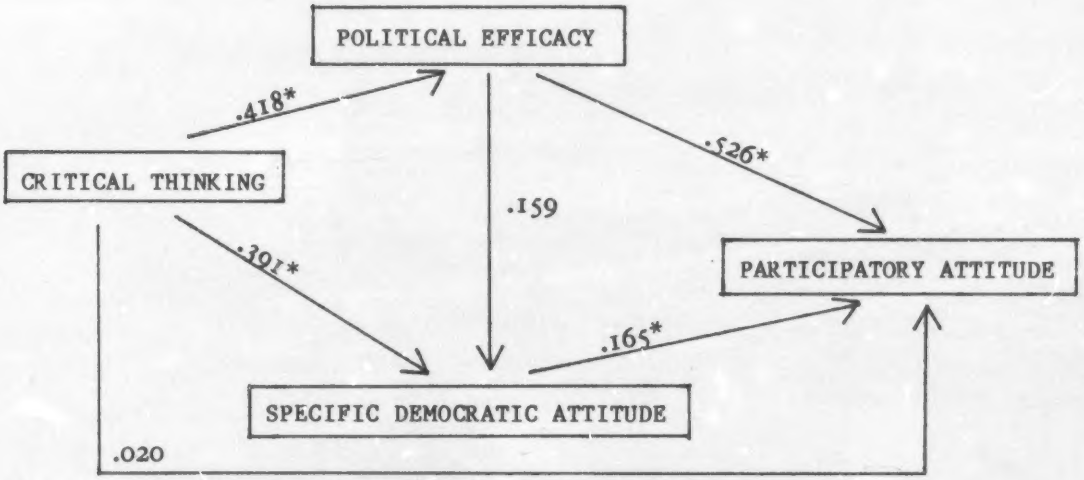
*Path coefficients significant at the .05 level.

Figure 2. Path diagram showing the direct effect of critical thinking and the indirect effect of critical thinking through political efficacy and democratic attitude on political participation.



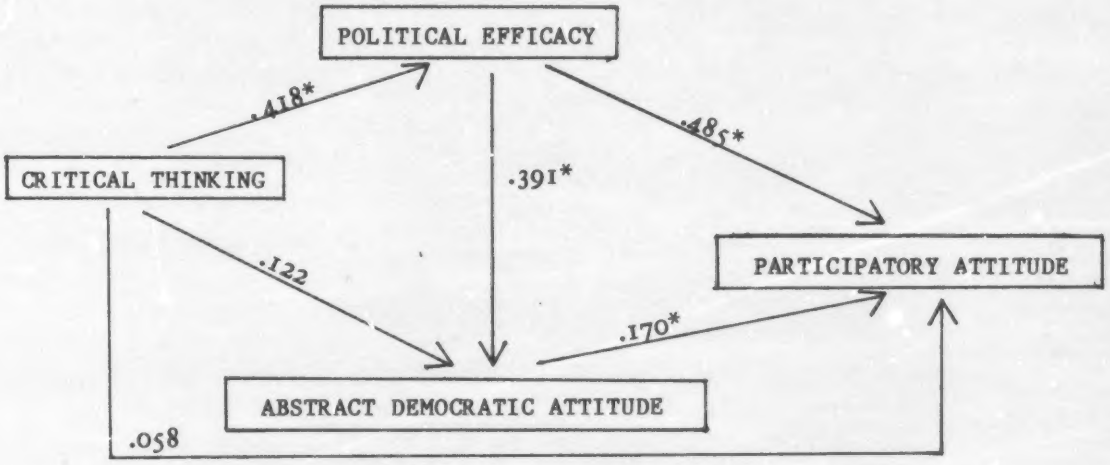
*Path coefficients significant at the .05 level.

Figure 3. Path diagram showing the direct effect of critical thinking and the indirect effects of critical thinking through political efficacy and specific democratic attitude on actual political participation.



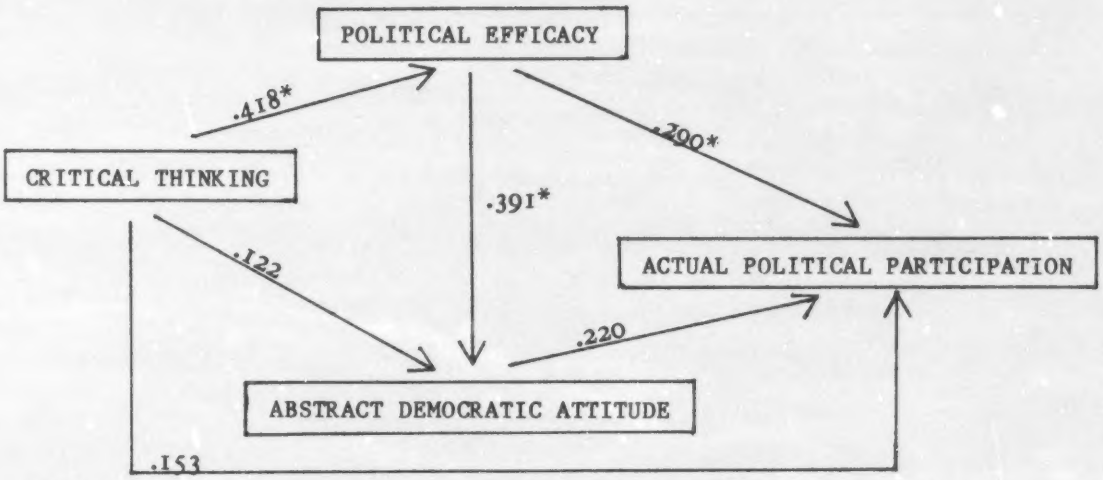
*Path coefficients significant at the .05 level.

Figure 4. Path diagram showing the dirct effect of critical thinking and the indirect effects of critical thinking through political efficacy and specific democratic attitude on participatory attitude.



*Path coefficients significant at the .05 level.

Figure 5. Path diagram showing the direct effect of critical thinking and the indirect effects of critical thinking through political efficacy and abstract democratic attitude on participatory attitude.



*Path coefficients significant at the .05 level.

Figure 6. Path diagram showing the direct effect of critical thinking and the indirect effects of critical thinking through political efficacy and abstract democratic attitude on actual political participation.

city government to listen to what I say.") Although political efficacy is an attitude and not a behavior, the items used to measure political efficacy are very action-oriented.

Why does critical thinking affect specific democratic attitude and not abstract democratic attitude? Americans are socialized into a belief in democratic norms and values. Even very young children will express support for freedom of speech, equality, etc. These attitudes are usually formed before a real capacity for critical thinking exists. It is possible to express these beliefs while not thinking critically about them. To go beyond mere "lip service" to democratic norms and values and to show an understanding of their implications by applying them consistently to specific situations probably requires higher cognitive ability. A critical thinker would be able to detect discrepancies between attitude and application. For example, a critical thinker would experience cognitive dissonance if, while expressing a belief in freedom of speech, he or she picketed a university for allowing someone with an unpopular point of view to be a speaker at a university function. Thus it seems logical that critical thinking is antecedent to the specific application of democratic norms and values and not an abstract attitude regarding the same issues.

The stronger, though not significant, direct effect on actual political participation than on participatory attitude indicates that critical thinking may have more bearing on whether or not one actually participates in the political sphere than on positive attitudes toward participation. It does seem that all the theoretical support for the influence of critical thinking political participation could be used to support the stronger effect of intellectual skills on political behavior than on political attitudes. This area of the relationship needs to be further studied and developed.

Political efficacy has a significant direct effect on abstract democratic attitude but not on specific democratic attitude. It also has a stronger direct effect on participatory attitude than on actual political participation. That the feeling that one could influence the political world would encourage a positive attitude toward participation certainly is not surprising. Why, though, is the effect not equally as strong for actual participation? It could be that for some people a feeling of efficacy, as well as a positive participatory attitude, are based on the same socialization patterns as an abstract democratic attitude. One is socialized into at least surface adherence to the belief that one can influence the government in the United States and one is told that one has a duty to participate. A person may hold these beliefs but not be able to integrate them into their actual political behavior. This phenomenon could explain the weaker effect of political efficacy on specific democratic attitude and on actual political participation.

Conclusions

The most powerful model employing the variables considered in this analysis is shown in Figure 3. The path diagram seems to be the best representation of the direct and indirect effects of critical thinking on political participation.

Critical thinking has a significant relationship with actual political participation ($r = .336$). Critical thinking does not have a significant direct effect on actual political participation ($p = .108$). The indirect effects of critical thinking on political participation through political efficacy and through specific democratic attitude are much greater than the direct effect (see Table I). The indirect effect of critical thinking on political participation through political efficacy is .146 and through specific democratic attitude is .060. The indirect effect through both intervening variables is negligible. Individually, political efficacy and specific democratic attitude are important mediators in the relationship between critical thinking and political participation. It seems that critical thinking strongly influences the development of feelings of political efficacy which in turn positively influences political participation. Critical thinking also has a positive direct effect on specific democratic attitude which has a positive influence on political participation.

This model seems to affirm the assumption that intellectual skills are antecedent to participatory behavior, but the relationship is not necessarily a direct one. Critical thinking has a role in developing political attitudes that promote participatory behavior. This influence seems to be stronger for attitudes that are more related to personal action than to feelings. The direct influence of critical thinking is stronger for actual political participation than for attitude toward participation, thus presenting further evidence that critical thinking skills are important to political action. The picture developed is that persons who possess certain intellectual skills are more likely to feel that they are able to cope with and influence the political world. They also are more likely to apply democratic norms and values to specific situations. Feelings of political efficacy and a democratic attitude that goes beyond mere lip service have a direct and positive effect on actual political participation. Thus critical thinkers are more likely to engage in political behavior than are those people who do not posses the intellectual skills. Because of the application of democratic norms and values and becuase of the intellectual ability to sort through and make sense of huge amounts of political data, it would seem that this participation would be more rational and effective, but this is a theoretical conclusion and not one borne out by the data.

Table 1

Comparison of the Direct Effect of Critical Thinking and the Indirect Effects Through Political Efficacy and Specific Democratic Attitude on Actual Political Participation

Direct Effect	Total Indirect Effects	Influence Through Variables	Variable
.108	.224		
		.146	Political Efficacy
		.060	Specific Democratic Attitude
		.013	Political Efficacy & Specific Democratic Attitude

The direct effect is not significant at the .05 level. Significance of indirect effects cannot be determined since they are products of direct paths.

Implications

Two major goals of social studies education are the development of critical thinking skills and citizenship education. A major focus of citizenship education is on political participation. This study has theoretical implications that apply to these two goals. The findings suggest that the relationship between critical thinking and actual political participation is stronger than the relationship between critical thinking and participatory attitude. The overarching citizenship goal is one of citizens who are willing and able to participate rationally in the political realm of American society. Development of political trust, political efficacy, democratic attitude, partipatory attitudes and other political attitudes is not the ultimate aim of social studies education; indeed, these attitudes are meaningless in a democratic society unless they are accompanied by appropriate political action. Thus it is incumbent upon educators to determine the knowledge, skills, and attitudes that directly influence actual political participation or that facilitate the development of factors that indirectly affect participatory behavior. Critical thinking skills appear to be important ones for political action and for desirable attitudes that positively affect action. Critical thinking skills are important beyond their inherent functions, and the two goals of social studies education, critical thinking and citizenship education, do not need to be treated as separate and distinct components of education. A relationship has, of course, been assumed, but little empirical evidence of the relationship or the nature of intervening variables in the relationship exists.

If critical thinking is antecedent to political efficacy, specific applications of democratic norms and values, and political participation, as this study indicates, then the teaching of critical thinking skills should be a major focus of social studies education. If, by developing the ability to think critically, social studies education can positively affect political behavior, then social studies education can more effectively realize the goal of citizenship education.

Implications for Curriculum and Instruction

The various skills and abilities involved in critical thinking can be taught in and of themselves, or they can be taught as an integral part of the social studies. Some evidence regarding the effects of pedagogical methodology in critical thinking may indicate the type of social studies education that may be most effective for the teaching of critical thinking.

Four studies, published together as the Indiana Experiments in Inquiry (Massialas, 1963), are directly concerned with the effects of the inquiry method on critical thinking skills. Each study reports the positive effects of inquiry teaching on critical thinking skills. Armstrong (1970) reports that the use of inquiry strategies in eighth grade social studies classes increased students' critical thinking performance. In a study of four classes described as inquiry-oriented, two utilizing a discovery approach and two utilizing a presentation approach, Boedeker (1971) concludes that the discovery treatment was most effective in teaching critical thinking skills. Her description of the

two approaches shows that the discovery approach is more closely related to a purely inquiry approach than is the presentation approach. Thus, an implication of the present study, based on the findings of the study and the empirical evidence presented above, is that the teaching of critical thinking skills through the inquiry method may positively affect participatory attitudes and behavior. The inquiry method of teaching may be most efective when the substantive content of instruction is political. Newmann (1975) and Oliver and Shaver (1966) suggest that traditional social studies content will not teach the thinking skills relevant to political thought and action. This research does indicate that the inquiry method may have an indirect effect on political participation through the development of critical thinking skills, and a fruitful area for future research may be one that incorporates participatory behavior in the research design.

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